IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant   :   Linda I. Hoffberg-Borghesani, et al.

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Serial No.   :   09/497,071

For: :   ADAPTIVE PATTERN RECOGNITION BASED CONTROL SYSTEM
                        AND METHOD

Group Art Unit: 2623

Examiner   :   Salce, Jason P.

- -

                                        September 26, 2008

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

APPEAL BRIEF PURSUANT TO 37 § C.F.R. 41.37

        Pursuant to 37 C.F.R. § 41.37, applicants herewith submit their Appeal Brief.

        A Notice of Appeal was timely filed on December 12, 2007, along with a PreAppeal

Brief Request for Review.

        A Notice of Panel Decision from Pre-Appeal Brief Review, indicating that at least one

issue remains for appeal, was issued March 14, 2008.

(i) Real party in interest.

The real parties in interest are Linda I. Borghesani-Hoffberg and Steven M. Hoffberg, inventors of an unassigned application.

(ii) Related appeals and interferences.

There are no prior decisions on appeal, interferences declared, or judicial proceedings in any related applications.

The following pending appeals are in applications which may be deemed related:

11/467,915

11/363,411

11/363,412

(iii) Status of claims.

Claims 1-154 are cancelled.

Claims 155-193 are rejected.

The statutory basis for rejection of claims 163-165, 174-176, and 178-189 is unspecified.
No statutory basis for rejection under 35 USC §§ 102-103 is specified for claims 163-165, and
174-189.

The rejection of claims 155-193 is being appealed.

(iv) Status of amendments.

An amendment to claim 177 proposing insertion of the word --of-- was proposed in Applicants' response dated October 12, 2007. The Advisory Action dated November 15, 2007 denied entry of this amendment, stating that it changed the scope of the claim (see p. 9 of Advisory Action). Therefore, the proposed amendment is not entered.

(v) Summary of claimed subject matter.

The following citation to sections of the application is intended to be exemplary, and not interpretive or limiting on the scope of the claims, and is therefore presented without prejudice or disclaimer with respect to other support which may be available in the application.

Claim 155 provides a method for selecting media (passim, p. 100, line 7), comprising the steps of:

storing data describing available media and storing data representing previously selected media (page 70, lines 17-20, page 75, lines 16-30, page 100, lines 5-9, page 223, lines 6-9, 2406);

automatically performing a search of said available media (2411) for a correspondence to data representing content characteristics of the previously selected media (page 114, line 3-page 115, line 12, page 1   36, line 29-page q137, line 6, page 140, lines 19-23, page 145, line 11-page 146, line 11, page 170, line 16-page 171, line 13, page 227, line 27-page 228, line 6, 2406), wherein said data representing content characteristics are not received as an input from a human user (page 146, line 12-page 147, line 3, passim); and

automatically issuing a notification of available media having characteristics corresponding to, but not identical to previously selected media (page 75, lines 16-24, page 134, lines 15-16, page 136, line 29-page 137, line6, page 161, line 23-page 162, line 3, 2405),

wherein said media comprises a media program (page 53, lines 6-8, page 123, lines 22-24, page 145, lines 11-23).

Claim 162 provides a system, comprising:

a controller component configured to control delivery of a media program (page 113, lines 7-28, page 170, line 16-page 171, line 2, 2402, 2404); and

a processor component configured to automatically determine a correspondence between data representing content characteristics of media within a set of available media programs (2411) with data representing content characteristics of previously delivered media (2406, 2407), wherein said data representing content characteristics are not received as input from a human user, and producing a signal dependent on a degree of said correspondence (page 92, lines 1-25, page 115, lines 3-20, page 167, lines 2-6, page 170, line 16-page 171, line 27, page 173, lines 11-20, page 227, line 27-page 228, line 6, Fig. 17, 2411, 2410).

Claim 168 provides a system for selecting media items, comprising:

(a)   a user interface for receiving a selection of a media item and for delivering a response to the selection (page 6, lines 15-29, page 70, lines 17-20, page 94, lines 13-19, page 136, line 29 – page 137, line 1, page 170, line 16-page 172, line 16, page 227, line 27 – page 228, line 6, 2405, 2401);

(b)   a processor for automatically searching media items available for selection and for presenting a recommendation of at least one available media item, based on a degree of correspondence of said selection and content characteristics of available media items input independently of a human user (page 92, lines 1-25, page 115, lines 3-20, page 137, lines 23-27, page 167, lines 2-6, page 170, line 16-page 171, line 27, page 173, lines 11-20, page 227, line 27 – page 228, line 6, Fig. 17, 2412, 2407); and

(c)   an accounting database for recording commercial transaction data relating to selections received (page 81, lines 9-27, page 91, lines 23-30, page 140, line 24-page 141, line 4, page 189, lines 2-4).

Claim 177 provides a method for proposing media, comprising the steps of:

storing data representing content characteristics of media previously selected (page 75, lines 16-30, page 223, lines 6-9, 2406), wherein the data representing characteristics of media previously selected are not input by a respective human user (page 114, lines 3-page 115, line 2, page 115, line 21-page 116, line 10, page 136, line 29-page 137, line 6, page 140, lines 19-23, page 145, lines 13-20, page 146, line 12-page 147, line 3, page 148, lines 3-12, page 170, line 16-page 171, line 13, page 227, line 27 – page 228, line 6 passim, 2410, 2411);

determining a set of available media programs, the set being associated with data representing content characteristics of members of the set of available media programs (page 114, lines 3-page 115, line 2, page 115, line 21-page 116, line 10, page 136, line 29-page 137, line 6, page 140, lines 19-23, page 145, lines 13-20, page 148, lines 3-12, page 161, line 23-page 162, line 3, page 170, line 16-page 171, line 13, page 227, line 27 – page 228, line 6);

automatically determining a degree of correspondence between data representing content characteristics a member of the set of available media programs and the data representing content characteristics of previously selected media (page 92, lines 1-25, page 115, page 145, line 13-page 146, line 2 lines 3-20, Fig. 17, 2407, 2412); and

outputting an identification of at least one member of the set of available media programs having content characteristics corresponding to content characteristics of previously selected media in dependence on the automatically determined correspondence (page 68, lines 2-5, 23-27,

page 69, line 27-page 70, line 16, page 94, lines 20-24, page 146, lines 2-11, page 161, line 23-page 162, line 3, page 176, lines 10-23, Fig. 31, 2405).

Claim 179 provides a method for presenting media, comprising the steps of:

storing data representing at least one content parameter relating prior selections by a respective user (page 75, lines 16-30, page 223, lines 6-9, 2406), the at least one parameter not being input by that respective user (page 146, line 12-page 147, line 3, page 167, lines 2-6, page 170, line 16-page 171, line 27, page 173, lines 11-20, page 227, line 27-page 228, line 6, page 145, lines 15-20, passim, 2410, 2411);

determining a set of available media programs, each member of the set having at least one associated content parameter (page 137, lines 1-6, page 145, line 27-page 146, line 11, page 161, line 23-page 162, line 3, page 227, line 27-page 228, line 6);

automatically determining a degree of correspondence of prior selections by the respective user and members of the set of available media programs based on at least the content parameters relating to prior selections by the respective user and the associated content parameters of members of the set of available media programs (page 92, lines 1-25, page 115, lines 3-20, page 145, line 27-page 146, line 11, page 167, lines 2-6, page 170, line 16-page 171, line 27, page 173, lines 11-20, page 227, line 27-page 228, line 6 Fig. 17, 2407, 2412); and

outputting a reference to at least one member of the set of available media programs based on at least the automatically determined degree of correspondence (page 68, lines 2-5, 23-27, page 69, line 27-page 70, line 16, page 94, lines 20-24, page 146, lines 2-11, page 161, line 23-page 162, line 3, page 176, lines 10-23, Fig. 31, 2405).

Claim 182 provides a method for proposing media, comprising the steps of:

storing data representing content-dependent characteristics of media previously selected by a respective user (page 70, lines 17-20, page 75, lines 16-30, page 100, lines 5-9, page 145, lines 13-20, page 223, lines 6-9, 2406);

determining a set of available media, the set being associated with data representing content-dependent characteristics of members of the set of available media (page 114, lines 3-page 115, line 2, page 115, line 21-page 116, line 10, page 136, line 29-page 137, line 6, page 140, lines 19-23, page 145, lines 13-20, , page 161, line 23-page 162, line 3, page 170, line 16-page 171, line 13, page 227, line 27-page 228, line 6, 2411, 2410, 2407);

automatically determining a degree of correspondence between content-dependent characteristics of available media and content-dependent characteristics of media previously selected by the respective user (page 92, lines 1-25, page 115, lines 3-20, page 145, line 13-page 146, line 11, Fig. 17, 2407, 2412); and

outputting an identification of at least one member of the set of available media having content-dependent characteristics corresponding to content-dependent characteristics of previously selected media by the respective user (page 68, lines 2-5, 23-27, page 69, line 27-page 70, line 16, page 94, lines 20-24, page 114, lines 3-page 115, line 2, page 115, line 21-page 116, line 10, page 136, line 29-page 137, line 6, page 140, lines 19-23, page 145, lines 13-20, page 148, lines 3-12, page 161, line 23-page 162, line 3, page 170, line 16-page 171, line 13, page 227, line 27-page 228, line 6 Fig. 31, 2405).

Claim 183 provides the method for selecting media, comprising the steps of:

receiving data describing a plurality of content characteristics of available media (page 137, lines 1-6, page 161, line 23-page 162, line 3, page 227, line 27-page 228, line 6, 2410, 2411);

defining data representing a plurality of content characteristics of media previously selected by a respective user (page 75, lines 16-30, page 114, lines 3-page 115, line 2, page 115, line 21-page 116, line 10, page 136, line 29-page 137, line 6, page 140, lines 19-23, page 145, lines 13-23, page 148, lines 3-12, page 170, line 16-page 171, line 13, page 227, line 27-page 228, line 6, page 223, lines 6-9, 2406);

automatically determining a relation between the available media and the media previously selected by the respective user, based on a respective plurality content characteristics of the available media and media previously selected by the respective user (page 92, lines 1-25, page 115, lines 3-20, page 145, line 13-page 146, line 2, page 146, lines 12-26, Fig. 17, 2407, 2412); and

producing an output in dependence on the automatically determined relation (page 68, lines 2-5, 23-27, page 69, line 27-page 70, line 16, page 94, lines 20-24, page 140, lines 26-29, page 146, lines 2-11, page 161, line 23-page 162, line 3, page 176, lines 10-23, Fig. 31, 2405).

(vi) Grounds of rejection to be reviewed on appeal.

i. Claim 177 is rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite.

ii. Claims 166-168, 177, 187, and 190-193 are rejected under 35 U.S.C. § 112, as allegedly failing to comply with the written description requirement.

iii. Claims 155-156 and 160-161 are rejected under 35 U.S.C. 35 U.S.C. § 102(e) as being anticipated by Vogel, US 5,253,066.

iv. Claims 157-159 and 166 are rejected under 35 U.S.C. § 103 as being obvious over Vogel in view of Young (US 4,706,121).

v. Claims 167 and 190-191 are rejected under 35 U.S.C. § 103 as being obvious over Vogel in view of Campbell

vi. Claim 162 is also rejected under 35 U.S.C. § 102(e) as being anticipated in view of Vogel.

vii. Claims 168-173 and 192-193 are rejected under 35 U.S.C. § 103 as being obvious over Vogel in view of Wachob (US 5,155,591).

(vii) Argument.

FORMAL REJECTIONS

i. Claim 177 is rejected under 35 U.S.C. § 112, second paragraph, as being allegedly indefinite.

The Examiner has interpreted the claim to mean: "data representing content characteristics**,** a member of the set of available media programs and the data representing content characteristics of previously selected media".   This interpretation is suggested by the Examiner to be unsupported by the Specification, and disparate with the other independent claims in the application. In fact, the correct interpretation requires the word "of" to replace the comma interpreted to exist by the Examiner, in a manner presented, for example, in claim 155, which provides the step of "automatically performing a search **of** said available media for a correspondence to data representing content characteristics of the previously selected media". It is error to interpret a claim in a manner inconsistent with the specification when an alternate is readily available which is consistent. A claim may be considered valid under 35 U.S.C. § 112, even though it contains a typographical error, if a person of ordinary skill (and creativity) in the art would have understood its scope. It is respectfully submitted that this is such a case.

Claim 177 provides two defined elements of information:

"…data representing content characteristics of media previously selected, wherein the data representing characteristics of media previously selected are not input by a respective human user"; and

"…a set of available media programs, the set being associated with data representing content characteristics of members of the set of available media programs".

A correspondence of the two elements is determined automatically: "automatically determining a degree of correspondence between data representing content characteristics [] a member of the <u>set of available media programs</u> and the <u>data representing content characteristics of previously selected media</u>".

An output is provided of "… an identification of at least one member of the <u>set of available media programs</u> having content characteristics corresponding to content characteristics of <u>previously selected media</u> in dependence on the automatically determined correspondence.

As seen, the word "of" is clearly implied by the claim at the position of the brackets, and a person of ordinary skill in the art would understand its presence, whether or not actually present. See, <u>Novo Industries, L.P. v. Micro Molds Corp.</u>, 350 F.3d 1348, 1354 (Fed. Cir. 2003)(court can only correct an error in a patent if "(1) the correction is not subject to reasonable debate based on the consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims.") Thus, a claim is not necessarily invalid if it contains a mere typographical error. The examiner's proposed "," at this juncture is inappropriate, since it implies a comparison of three elements: "data representing content characteristics", "a member of the set of available media programs", and "data representing content characteristics of previously selected media". This interpretation is inappropriate, since it segregates the "data representing content characteristics" and "a member of the set of available media programs", which are previously linked in a single element of information. Likewise, the terminal language of the claim reinforces this interpretation, since it clearly indicates that the comparison is between two elements of information. Thus, the examiner's proposed alternate is inconsistent and spurious.

Indeed, the alternate three way comparison suggested by the Examiner is not taught or suggested by the reference(s), and is therefore patentable, and the references cited by the Examiner do not present a prima facie case of unpatentability for this claim interpretation. In particular, assuming the examiner's characterization of Vogel to be correct, the examiner states: "Vogel also teaches <u>automatically</u> performing a search of said available media for a correspondence to data representing content characteristics of the previously selected media (see Column 5, lines 13-20 for performing a search by the user initiating display of the program menu which displays the time of broadcast, title and censorship classification, all of which are part of the real time data (see Column 3, lines 59-66), therefore initiation of the program menu clearly allows a user to perform a search of available media for a correspondence to data representing said characteristics of media previously selected by the user). Thus, even the examiner asserts that Vogel teaches, if at all, only a two-way comparison, which is distinguished by the Examiner's interpretation of the claim. Thus, should the examiner's interpretation be adopted, the claim should nevertheless be considered patentable.

ii. Claims 166-168, 177, 187, and 190-193 are rejected under 35 U.S.C. § 112, as allegedly failing to comply with the written description requirement.

The support demonstrated below for each claim is intended to be exemplary, and not exclusive, and therefore the citations provided below are not intended to limit the scope of protection sought or otherwise interpret the claims. A text-version of the specification is available upon request should the Examiner desire this document.

In summary:

Claim 166 provides that the at least one memory further stores information regarding at least two humans, wherein said signal is dependent on a defined set of humans. This element is

clearly supported in the specification at, for example at Page 117, lines 9-15; Page 138, line 15-Page 139, line 2; and Example 27, page 203 et seq.

Claim 167 provides a system wherein a presentation of media is restricted in dependence on a financial transaction. Claim 190 provides a method comprising the step of restricting a use of available media in dependence on a financial transaction. Claim 191 provides a method comprising the step of financially accounting in dependence on the output. These are supported, for example, in Example 31, page 213, et seq.

Claim 168 provides a system for selecting media items, comprising "an accounting database for recording commercial transaction data relating to selections received." See, generally, pages 75-81 for support. This language is believed particularly supported on Page 73, lines 6-17 ("The present invention also provides a mechanism for copyright holders or other proprietary interests to be protected, by limiting access to information be encryption or selective encryption, and providing an accounting system for determining and tracking license or broadcast fees.") See also Page 75, line 7-Page 76, line 2; Page 87, lines 6-24; Page 103, lines 11-15; Page 146, lines 26-Page 147, line 7; Example 31, especially Page 214, lines 9-18.

Claim 177 is largely similar to other independent claims which were not rejected. However, all or portions of claim 177 are supported at least at Fig. 21, e.g., ref. 2107, Fig. 24, e.g., ref. 2406, Fig. 26, e.g., ref. 2607, 2608, Fig. 31; Page 69, lines 15-23; Page 86, lines 1-10; Page 71, line 25-Page 72, line 5; Page 92, lines 3-9; Page 93, lines 10-26; Page 102, lines 19-26; and Page 107, line 7-Page 108, line 2.

Claim 187 provides a method wherein said output comprises a displayed list of hypertext entries representing available media, further comprising the step of receiving a selection of one

of the hypertext entries. This is supported, for example, at Page 63, lines 6-26; Page 88, lines 9-12; and Page 127, lines 27-Page 128, line 5.

Claim 192 provides a method comprising the step of delivering an advertisement in dependence on characteristics of media previously selected by the user. Claim 193 provides a method comprising the step of accounting for delivery of an advertisement. These claims are believed supported in the specification at Page 44, line 33-Page 47, line 13; Page 74, line 20-Page 75, line 25; Page 83, line 29-Page 84, line 28; Page 85, lines 4-13; Page 86, lines 1-25; and Page 87, lines 16-24.

A more detailed analysis follows:

Claim 166 provides that the at least one memory further stores information regarding at least two humans, wherein said signal is dependent on a defined set of humans. This element is clearly supported in the specification, for example:

Page 117, lines 9-15:

> If multiple users use the device, then the device identifies the relevant users. This may be by explicit identification by keyboard, bar code, magnetic code, smart card (which may advantageously include a user profile for use with a number of devices), an RF-ID or IR-ID transponder, voice recognition, image recognition, or fingerprint identification. It is noted that smart cards or other intelligent or data-containing identifications systems may be used with different types of devices, for example video, audio, home appliances, HVAC and automobile systems.

Page 138, line 15-Page 139, line 2:

> Another example of the use of an adaptive user interface level is a user who repeatedly requests "help" or user instructions, through the explicit help request detector 2115, which causes an output from the current help level output 2102; such a user may benefit from an automatic context-sensitive help system, however such a system may interfere with an advanced user, and is unnecessary in that case and should be avoided. This adaptive user interface level concept is not limited to a particular embodiment of the

present invention, such as a VCR, and in fact, may be broadly used wherever a system includes an interface that is intended for use by both experienced and inexperienced users. This differs from normal help systems which must be specifically requested, or "balloon help" (Apple Computer, Macintosh System 7.0, 7.1, 7.5) which is either engaged or disengaged, but not adaptive to the particular situation based on an implicit request or predicted need. In the case of a single user or group of users, the interface could maintain a history of feature usage for each user, as in the past user history block 2107, and provide a lower user interface level for those features which are rarely used, and therefore less familiar to the user, through the current user level output 2101.

It should be noted that the present system preferably detects an identity of a user, and therefore differentiates between different users by an explicit or implicit identification system. Therefore, the system may accumulate information regarding users without confusion or intermingling.

See also example 27, page 203 et seq.

Claim 167 provides a system wherein a presentation of media is restricted in dependence on a financial transaction. Claim 190 provides a method comprising the step of restricting a use of available media in dependence on a financial transaction. Claim 191 provides a method comprising the step of financially accounting in dependence on the output. These are supported, for example, in Example 31, page 213, et seq.:

Example 31

SET TOP BOX WITH ELECTRONIC COMMERCE CAPABILITY

*   *   *

The payment or micropayment scheme may be integrated with a content management/digital watermarking/copy protection scheme, for example where the transaction purchases a limited license in an electronic audio-visual work. The system typically automatically triggers a monetary transaction to compensate the proprietary rights holder, although under certain circumstances the delivery of the work and the compensation for viewing may be decoupled. For example, as explained elsewhere herein, the content may be stored in a privileged storage medium. Thus, the accounting for use occurs upon substantial viewing, and not upon mere downloading to a "buffer". Alternately, the privileged store is encrypted, and the decryption key is provided only upon payment. Thus, in the case, the payment transaction may be relatively simple, and not require a complete download of a massive audio-visual work.

Typically, a pay-per-view work will be downloaded in a push process to multiple set top boxes using a common encryption key. Once received by an individual addressable box, the work will be re-encrypted based on the identity or identifier of the hardware, using a public key-private key system. Thus, using the public key of the identified hardware, a private key transmitted for decrypting the work and accounting transaction may be performed to compensate the content provider. This system may also work to subsidize the viewing of content. If a viewer is willing to receive certain commercials (which may be stored in mass storage on the hardware or streamed using broadband or packet technology), a payment in favor of the viewer may be received. If the hardware has viewer sensing technology, the compensation may be based on the individuals watching the commercial. If the commercial is time shifted, compensation may be arranged depending on the time of viewing and a formula, which for example may account for staleness of the commercial.

*   *   *

The types of content delivered may include images, video, multimedia clips, music, text content, templates, software and applets, and any other sort of information.

Claim 168 provides a system for selecting media items, comprising:

(a)   a user interface for receiving a selection of a media item and for delivering a response to the selection;

(b)   a processor for automatically searching media items available for selection and for presenting a recommendation of at least one available media item, based on a degree of correspondence of said selection and content characteristics of available media items input independently of a human user; and

(c)   an accounting database for recording commercial transaction data relating to selections received.

It is presumed that it is element (c) which is deemed to lack written description, since the other elements share commonality with claims that are not so rejected. (See also support

specified for claim 177). See, generally, pages 75-81 for support. The language of element (c) is believed particularly supported on Page 73, lines 6-17:

> According to the present invention, if such characterizations are broadcast, they may, as stated above, be in band or out of band, e.g., making use of unused available spectrum bandwidth within the NTSC channel space, or other broadcast system channel space, or may be "simulcast" on a separate channel, such as an FM sideband or separate transmission channel. Use of a separate channel would allow a separate organization, other than the network broadcasters, to provide the characterization data for distribution to users of devices that make use of the present intelligent system for controlling a VCR or other broadcast information processing device. Thus, the characterization generating means need not be directly linked to the local user machine in order to fall within the scope of the present invention. The present invention also provides a mechanism for copyright holders or other proprietary interests to be protected, by limiting access to information be encryption or selective encryption, and providing an accounting system for determining and tracking license or broadcast fees.

See also Page 75, line 7-Page 76, line 2:

> Because the system is intelligent, copy protection and royalty accounting schemes may readily be implemented. Thus, broadcasters and content providers may encode broadcasts in such a way as to control the operation of the consumer device. For example, an IEEE-1394-type encryption key support (e.g., DTCP or XCA)/copy protection or DIVX scheme may be implemented. Further, certain commercial sponsors may be able to avoid deletion of their advertisement, while others may allow truncation. The acceptability of this to the consumer may depend on subsidies. In other words, a company is willing to pay for advertising. Instead of paying for placements directly to the media, a portion is paid to a service provider, based on consumer viewing. The media, on the other hand, may seek to adopt a pay-per-view policy, at least with respect to the service provider, in lieu of direct advertising revenues. The service provider will account to both advertisers and content providers for use. With sufficient viewing of commercials, the entire service charge for a system might be covered for a user. On the other hand, a viewer might prefer to avoid all commercials, and not get the benefit of a subsidy. The service provider performs the economically efficient function of delivering optimized, substituted commercials for the almost random commercials which flood the commercial broadcast networks, and thus can accrue greater profits, even after paying content providers a reasonable fee. An advertiser, by selecting a particular audience, may pay less than it would otherwise pay to a broadcaster. The content providers may also charge more for the privilege of use of their works.

> As stated above, the content may be copy protected by the use of encryption and/or lockout mechanisms. Thus, by providing an alternative to an analog VCR, a full end-to-end encrypted signal may be provided, such as that proposed for the IEEE-1394

copy protection scheme. Because enhanced recording capabilities are provided to the consumer, the acceptance will be high. <u>Because of the encryption, lack of portability and continued royalty accounting, content provider acceptance will also likely be high</u>.

See also Page 87, lines 6-24:

       For example, where the broadcaster has a high degree of control over the initial broadcast, e.g., pay per view under license, or where the broadcaster may claim substantial continuing rights in the work after recording, <u>the enforcement of a proprietary replay system may be accepted</u>. For example, a work is broadcast as an encrypted digital data stream, with selective decryption at the recipient's receiver, under license from the broadcaster. <u>In this case, a recording system is provided which retains the encryption characteristics, ensuring the integrity of the accounting process</u>. During presentation of the recorded work, commercial information is appropriately presented to the recipient during existing or created gaps, or in an associated output separate from the content presentation. The recipient, as a result, receives the benefit of the original subsidy, or may receive a new subsidy.

       Therefore, similar to the known DIVX system, <u>an encrypted media may be mass distributed, which requires authorization for display</u>. Instead, however, of requiring the recipient to pay for the initial and subsequent displays of the content, <u>the player integrates advertising content into the output, which may vary based on the audience, time and past history, as well as other factors discussed herein</u>. Given the interactive and variable nature of the presentation, the user or audience may even veto ("fast forward through") a particular commercial. <u>In this case, the use may have to account for a fee, or other advertisers may tack up the slack</u>. The veto provides information regarding the desires of the viewer, and may be used to help select future messages to the displayed or presented.

See Page 103, lines 11-15:

       <u>Still another object of the present invention is to provide a system, wherein the program material is encrypted, further comprising means for decrypting the program material to produce a decryption event; and means for charging an account of the viewer based on the occurrence of a decryption event. Thus, a decryption processor and an accounting database are provided for these purposes</u>.

See also Page 146, lines 26-Page 147, line 7:

       A preferred fractal-based system according to the present information provides the source data preprocessed to allow easy and efficient extraction of information. While much precharacterization information may be provided explicitly, the preferred system

allows other, unindexed information to also be extracted from the signal. <u>Further, the preferred system provides for an accounting system that facilitates pay-per-view functions. Thus, the interface of the present invention could interact with the standard accounting system to allow royalty-based recording or viewing, and possibly implement a serial-copy recording prevention system</u>. Prior art systems also require a user to explicitly select a program, rather than allow an intelligent system to assist in selection and programming of the device. The EMC^2 system is described in "EMC^2 Pushes Video Rental By Satellite", Electronic Engineering Times, December 2, 1991, p.1, p. 98. See also, Yoshida, J., "The Video-on-demand Demand", Electronic Engineering Times, March 15, 1993, pp. 1, 72.

See also Example 31, *supra*, especially Page 214, lines 9-18:

The payment or micropayment scheme may be integrated with a content management/digital watermarking/copy protection scheme, for example where the transaction purchases a limited license in an electronic audio-visual work. The system typically automatically triggers a monetary transaction to compensate the proprietary rights holder, although under certain circumstances the delivery of the work and the compensation for viewing may be decoupled. For example, as explained elsewhere herein, the content may be stored in a privileged storage medium. Thus, the accounting for use occurs upon substantial viewing, and not upon mere downloading to a "buffer". Alternately, the privileged store is encrypted, and the decryption key is provided only upon payment. Thus, in the case, the payment transaction may be relatively simple, and not require a complete download of a massive audio-visual work.

Claim 177 provides a method for proposing media, comprising the steps of:

storing data representing content characteristics of media previously selected, wherein the

data representing characteristics of media previously selected are not input by a respective

human user;

determining a set of available media programs, the set being associated with data

representing content characteristics of members of the set of available media programs;

automatically determining a degree of correspondence between data representing content characteristics of a member of the set of available media programs and the data representing content characteristics of previously selected media; and

outputting an identification of at least one member of the set of available media programs having content characteristics corresponding to content characteristics of previously selected media in dependence on the automatically determined correspondence.

The basis for the rejection is not fully understood, since claim 177 corresponds largely to other independent claims which were not rejected. However, all or portions of claim 177 are supported at least at Fig. 21, e.g., ref. 2107, Fig. 24, e.g., ref. 2406, Fig. 26, e.g., ref. 2607, 2608, Fig. 31. See also:

Page 69, lines 15-23:

> The present invention extends beyond simple predictive schemes which present exclusively a most recently executed command or most recently opened files. Thus, the possible choices are weighted in a multifactorial method, e.g., <u>history of use</u>, context and system status, rather than a single simple criterion alone. Known simple predictive criteria often exclude choices not previously selected, rather than weighing these choices in context with those which have been previously selected. While the system according to the present invention may include initial weightings, logical preferences or default settings, through use, the derived weightings are obtained adaptively based on an analysis of the status, <u>history of use</u> and context. It is noted that not all of the possible choices need be weighted, but rather merely a subset thereof.

Page 86, lines 1-10:

> A preferred embodiment includes a subscription television system having a plurality of received channels. At least one of these channels is associated with codes to allow determination of content from variable segments. It is also possible to identify these variable segments without these codes, although the preferred system includes use of such codes. These codes also allow simple identification of the content for accounting purposes. Upon detection of a variable segment, a commercial advertisement is selected

for presentation to the recipient. This variable segment is selected based on the characteristics of the recipient(s), the history of use of the device by the recipient(s), the context of use, the arrangements made by the commercial information provider(s) for presentation of information, and the availability of information for presentation. Other factors may include the above-mentioned accounting system factors….

Page 71, line 25-Page 72, line 5:

The videotext signal of the prior art includes a digitally encoded text message that may be displayed in conjunction with the displayed image, similar to the closed caption system. The aforementioned West German system demonstrates one way in which the transmitted signal may be received by a device and interpreted to provide useful information other than the transmitted program itself. However, the prior art does not disclose how this signal may be used to index and catalog the contents of a tape, nor does it disclose how this signal may be used to classify or interpret the character of the broadcast. In other words, in one embodiment of the present invention, the videotext or closed caption signal is not only interpreted as a literal label, as in the prior art, but is also further processed and analyzed to yield data about the content of the broadcast, other than merely an explicit identification of the simultaneously broadcast information.

Page 92, lines 3-9:

The programmable control may further comprise a user input processing system for adaptively determining a viewer preference based on the user input received by the controller; a program material processing system for characterizing the program material based on its content; a correlator for correlating the characterized content of the program material with the determined viewer preference to produce a correlation index; and a processor, selectively processing the program material based on the correlation index, the data processing system receiving an input from the processor.

It is noted that a metadata stream associated with the content may be employed to characterize the content, relieving the receiver or client device from the need for characterizing the content. This metadata may be structured or unstructured. The metadata and data relating to the use or consumption of the content is then used to determine or update the user profile. It is noted that the content may be of any type, and therefore need no be video or multimedia. In the case of a structured metadata, the updating of the user profile may include a simple time-weighted decay (e.g., a simple infinite impulse response filter with exponential decay or diurnal variations, or other type) for correlation with future metadata records, or a more complex algorithm.

Page 93, lines 10-26:

It is still another object according to the present invention to provide a control wherein the user input processing system monitors a pattern of user activity and predicts a viewer preference; the program material processing system comprising a processor for preprocessing the program material to produce a reduced data flow information signal substantially retaining information relating to the abstract information content of the program material and selectively eliminating data not relating to the abstract information content of the program material and for characterizing the information signal based on the abstract information content; and a comparing system for determining if the correlation index is indicative of a probable high correlation between the characterization of the information signal and the viewer preference and causing the stored program material to be processed by the processing means based on the determination. The system according to this aspect of the present invention preferably comprises an image program material storage and retrieval system.

The present invention further provides a control further comprising a memory for storing a characterization of the program material; an input for receiving a feedback signal from the viewer indicating a degree of agreement with the correlation index determination, wherein the feedback signal and the stored characterization are used by the viewer preference predicting means to predict a new viewer preference.

Page 102, lines 19-26:

Another object of the present invention provides a system for presenting a program to a viewer, comprising a source of program material; means for determining a viewer preference, the viewer preference optionally being context sensitive; means for receiving the program material from the source; means for characterizing the program material based on its content; means for correlating the characterized content of the program material with the determined viewer preference to produce a correlation index; and means for presenting the program material to the viewer, if the correlation index indicates a probable high correlation between the characterization of the program material and the viewer preference.

Page 107, line 7-Page 108, line 2:

Another object of an embodiment of the present invention provides an apparatus comprising a user interface, receiving a control input and a user attribute from the user; a memory system, storing the control input and user attribute; an input for receiving content data; means for storing data describing elements of the content data; means for presenting information to the user relating to the content data, the information being for assisting the user in defining a control input, the information being based on the stored user attribute and the data describing elements of the content data; and means for processing elements of the content data in dependence on the control input, having an

output. This apparatus according to this embodiment may be further defined as a terminal used by users of a television program delivery system for suggesting programs to users, wherein the user interface comprises <u>means for gathering the user specific data to be used in selecting programs; the memory system comprises means, connected to the gathering means, for storing the user specific data; the input for receiving data describing elements of the content data comprises means for receiving the program control information containing the program description data; and the processing means comprises program selection means, operably connected to the storing means and the receiving means, for selecting one or more programs using a user's programming preferences and the program control information. In this case, the program selection means may comprise a processor, wherein the user programming preferences are generated from the user specific data; and means, operably connected to the program selection means, for suggesting the selected programs to the user</u>. The apparatus processing means selectively may records the content data based on the output of the processing means. <u>Further, the presenting means presents information to the user in a menu format. The presenting means may comprises means for matching the user attribute to content data.</u>

     <u>The data describing elements of an associated data stream may, for example, comprise a program guide generated remotely from the apparatus and transmitted in electronically accessible form; data defined by a human input, and/or data defined by an automated analysis of the content data.</u>

The specification is therefore believed to be replete with support for the scope of claim 177.

Claim 187 provides a method wherein said output comprises a displayed list of hypertext entries representing available media, further comprising the step of receiving a selection of one of the hypertext entries. See:

Page 63, lines 6-26:

     In fact, while hardware efficiency dictates common hardware for the interface system and the operational routine, other designs may separate the interface system from the operational system, allowing portability and efficient application of a single interface system for a number of operational systems. Thus, the present invention also proposes a portable human interface system which may be used to control a number of different devices. <u>In this case, a web browser metaphor is preferred, as it has become a standard for electronic communications.</u>

A portable interface may, for example, take the form of a personal digital assistant or downloaded JAVA applet, with the data originating in a web server. The data from a web server or embedded web server may include a binary file, a generic HTML/XML file, or other data type. The interface receives the data and formats it based, at least in part, on parameters specific to the client or user. Thus, the presentation of data is responsive to the user, based on user preferences, as opposed to hardware limitations or compatibility issues. In a preferred embodiment, the data is transmitted separately from the presentation definition. The presentation definition, on the other hand, provides a set of parameters that propose or constrain the data presentation. The user system also provides a set of parameters that set preferences on presentation. Further, the data itself is analyzed for appropriate presentation parameters. These three sets of considerations are all inputs into a "negotiation" for an ultimate presentation scheme. Thus, the presentation is adaptive to server parameters, user parameters, and the data itself. For example, in a typical web-context, the color, size, typestyle, and layout of text may be modified based on these considerations. Other factors that may be altered include frame size and layout, size of hotspots, requirement for single or double clicks for action, and the like.

Page 88, lines 9-12:

Another embodiment according to the present invention provides a hypertext linked media or multimedia environment, such as HTML/World Wide Web, wherein information transmitted and/or displayed is adaptively selected based on the particular user or the user's receiving system. Thus, various elements may be dynamically substituted during use.

Page 127, lines 27-Page 128, line 5 (HyperPAD is a hypertext-supporting program):

The present embodiment was constructed and tested using HyperPAD™, a rapid prototyping package for an IBM-PC Compatible Computer. It is, of course obvious that the present embodiment could be incorporated in a commercial VCR machine by those skilled in the art, or be implemented on many types of general purpose computers with output screens which allow on-screen feedback for the programming operation. Further, the system of the present embodiment can include a remote-control device which communicates with a VCR through an infrared beam or beams, and can thus exert control over an infrared remote controlled VCR, or translate the programming information and communicate through an infrared remote control, using the standard type infrared transmitter.

Claim 192 provides a method comprising the step of delivering an advertisement in dependence on characteristics of media previously selected by the user. Claim 193 provides a method comprising the step of accounting for delivery of an advertisement. These claims are believed supported in the specification at:

Page 44, line 33-Page 47, line 13:

DEMOGRAPHICALLY TARGETED ADVERTISING THROUGH ELECTRONIC MEDIA

Since the advent of commercially subsidized print media, attempts have been made to optimize the placement and compensation aspects relating to commercial messages or advertisements in media. In general, advertisers subsidize a large percentage of the cost of mass publications and communications, in return for the inclusion and possibly strategic placement of advertisements in the publication. Therefore, the cost of advertising in such media includes the cost of preparation of the advertisement, a share of the cost of publication and a profit for the content provider and other services. Since the advertiser must bear some of the cost of production and distribution of the content, in addition to the cost of advertisement placement itself, the cost may be substantial. The advertiser justifies this cost because the wide public reception of the advertisement, typically low cost per consumer "impression", with a related stimulation of sales due to commercial awareness of the advertisers' products and services. Therefore, the advertisement is deemed particularly effective if either the audience is very large, with ad response proportionate to the size of the audience, or if it targets a particularly receptive audience, with a response rate higher than the general population.

On the other hand, the recipient of the commercial publication is generally receptive of the advertisement, even though it incurs a potential inefficiency in terms of increased data content and inefficiencies in receiving the content segment, for two reasons. First, the advertisements subsidize the publication, lowering the monetary cost to the recipient. Second, it is considered economically efficient for a recipient to review commercial information relating to prospective purchases or expenditures, rather than directly soliciting such information from the commercial source, i.e., "push" is better than "pull". For this reason specialty publications are produced, including commercial messages appropriate for the particular content of the media or the intended recipients. In fact, in some forms of publications, most, if not all the information content is paid advertisements, with few editorial or independently produced pieces.

Mass media, on the other hand, tends not to include specialty commercial messages, because the interested population is too disperse and the resulting response rate from an advertisement too low, and further because the majority of the audience will be disinterested or even respond negatively to certain messages. Thus, mass media generally includes a majority of retail advertisements, with specialty advertisements relegated, if at all, to a classified section which is not interspersed with other content.

This is the basis for a "least common denominator" theory of marketing, that mass media must merchandise to the masses, while specialty media merchandises to selected subpopulations. As a corollary, using such types of media, it may be difficult to reach certain specialized populations who do not consistently receive a common set of publications or who receive primarily publications which are unspecialized or directed to a different specialty.

Where a recipient has limited time for reviewing media, he or she must divide his or her available time between mass media and specialty media. Alternatively, publication on demand services have arisen which select content based on a user's expressed interests. Presumably, these same content selection algorithms may be applied to commercial messages. However, these services are primarily limited distribution, and have content that is as variable as commercial messages. Likewise, mass media often has regionally variable content, such as local commercials on television or cable systems, or differing editions of print media for different regions. Methods are known for demographic targeting of commercial information to consumers; however, both the delivery methods and demographic targeting methods tend to be suboptimal.

Sometimes, however, the system breaks down, resulting in inefficiencies. These result where the audience or a substantial proportion thereof is inappropriate for the material presented, and thus realize a low response rate for an advertiser or even a negative response for the media due to the existence of particular commercial advertisers. The recipients are bombarded with inappropriate information, while the advertiser fails to realize optimal return on its advertising expenditures. In order to minimize the occurrence of these situations, services are available, including A.C. Nielsen Co. and Arbitron, Inc., which seek to determine the demographics of the audience of broadcast media.

U.S. 5,436,653, incorporated herein by reference, relates to a broadcast segment recognition system in which a signature representing a monitored broadcast segment is compared with broadcast segment signatures in a data base representing known broadcast segments to determine whether a match exists. Therefore, the broadcast viewing habits of a user may be efficiently and automatically monitored, without pre-encoding broadcasts or the like.

U.S. 5,459,306, incorporated herein by reference, relates to a method for delivering targeting information to a prospective individual user. Personal user information is gathered, as well as information on a user's use of a product, correlated and stored. Classes of information potentially relevant to future purchases are then identified, and promotions and recommendations delivered based on the information and the user information.

U.S. 5,483,278, incorporated herein by reference, relates to a system having a user interface which can access downloaded electronic programs and associated information records, and which can automatically correlate the program information with the preferences of the user, to create and display a personalized information database based upon the results of the correlation. Likewise, U.S. 5,223,914, expressly incorporated herein by reference, relates to a system and method for automatically correlating user preferences with a T.V. program information database.

U.S. Patent No. 5,231,494, expressly incorporated herein by reference, relates to a system that selectively extracts one of a plurality of compressed television signals from a single channel based on viewer characteristics.

U.S. Patent No. 5,410,344 relates to a system for selecting video programs based on viewers preferences, based on content codes of the programs.

U.S. 5,485,518, incorporated herein by reference, relates to a system for electronic media program recognition and choice, allowing, for example, parental control of the individual programs presented, without requiring a transmitted editorial code.

Page 74, line 20-Page 75, line 25:

One particular aspect of these time-shifting consumer media recording devices is how they deal with advertising materials that accompany program material. In many instances, the user seeks to avoid "commercials", and the device may be programmed to oblige. However, as such devices gain wider acceptance, advertisers will be reluctant to subsidize broadcasts. Therefore, an advertising system may be integrated into the playback device that seeks to optimize the commercial messages presented to a viewer. By optimizing the messages or advertisements, the viewer is more receptive to the message, and economic implications ensue. For example, a viewer may be compensated, directly or indirectly, for viewing the commercials, which may be closely monitored and audited, such as by taking pictures of the audience in front of a "set-top box". The acquired data, including viewer preferences, may be transmitted back to commercial sponsors, allowing detailed demographic analysis.

In order to ensure privacy, the preference information and/or images may be analyzed by a proxy, with the raw data separated from the commercial users of such data. Thus, for example, the particular users of a system may register their biometric characteristics, e.g., face. Thereafter, the imager captures facial images and correlates these with its internal database. The image itself therefore need not be stored or transmitted. Viewer preferences and habits, on the other hand, likely must be transmitted to a central processing system for analysis.

Because the system is intelligent, copy protection and royalty accounting schemes may readily be implemented. Thus, broadcasters and content providers may encode broadcasts in such a way as to control the operation of the consumer device. For example, an IEEE-1394-type encryption key support (e.g., DTCP or XCA)/copy protection or DIVX scheme may be implemented. Further, certain commercial sponsors may be able to avoid deletion of their advertisement, while others may allow truncation. The acceptability of this to the consumer may depend on subsidies. In other words, a company is willing to pay for advertising. Instead of paying for placements directly to the media, a portion is paid to a service provider, based on consumer viewing. The media, on the other hand, may seek to adopt a pay-per-view policy, at least with respect to the service provider, in lieu of direct advertising revenues. The service provider will account to both advertisers and content providers for use. With sufficient viewing of commercials, the entire service charge for a system might be covered for a user. On the

other hand, a viewer might prefer to avoid all commercials, and not get the benefit of a subsidy. The service provider performs the economically efficient function of delivering optimized, substituted commercials for the almost random commercials which flood the commercial broadcast networks, and thus can accrue greater profits, even after paying content providers a reasonable fee. An advertiser, by selecting a particular audience, may pay less than it would otherwise pay to a broadcaster. The content providers may also charge more for the privilege of use of their works.

Page 83, line 29-Page 84, line 28:

The present invention provides a system and method for making use of the available broadcast media forms for improving an efficiency of matching commercial information to the desires and interests of a recipient, improving a cost effectiveness for advertisers, improving a perceived quality of commercial information received by recipients and increasing profits and reducing required information transmittal by publishers and media distribution entities.

This improved advertising efficiency is accomplished by providing a system for collating a constant or underlying published content work with a varying, demographically or otherwise optimized commercial information content. This commercial information content therefore need not be predetermined or even known to the publisher of the underlying works, and in fact may be determined on an individual receiver basis. It is also possible to integrate the demographically optimized information within the content. For example, overlays in traditional media, and electronic substitutions or edits in new media, may allow seamless integration. The content alteration need not be only based on commercial information, and therefore the content may vary based on the user or recipient.

U.S. Patent No. 5,469,206, expressly incorporated herein by reference, relates to a system that automatically correlates user preferences with electronic shopping information to create a customized database for the user.

Therefore, the granularity of demographic marketing may be very fine, on a receiver-by-receiver basis. Further, the accounting for advertisers will be more accurate, with a large sample and high quality information. In fact, in a further embodiment, an interactive medium may be used allowing immediate or real time communication between recipient and advertiser. This communication may involve the Internet, private networks or dial-up connections. Because the commercial messages are particularly directed to recipients, communication with each selected recipient is more valuable to an advertiser and that advertiser is willing to pay more for communication with each selected recipient. Recipients may therefore be selected to receive the highest valued appropriate commercial message(s). Thus, advertisers will tend to pay less and media producers will gain more revenues. Recipients will gain the benefit of selected and appropriate media, and further, may provide feedback for determining their preferences, which will likely correspond with their purchasing habits. Thus, the recipient will benefit by receiving optimized information.

Page 85, lines 4-13:

This optimization is achieved by providing a device local to the recipient which selectively presents commercial information to the recipient based on characteristics individual to the recipient, which may be input by the recipient, the publisher, the advertiser, and/or learned by the system based on explicit or implicit feedback. The local device either has a local memory for advertising materials, or a telereception link for receiving commercial information for presentation, either on a real time basis or stored for later presentation. In a further embodiment, a user may control the content and/or commercial information received. In this case, the accounting system involves the user's account, and, for example, the recipient may be denied the subsidy from the commercial advertiser, and pay for the privilege of commercial free content.

Page 86, lines 1-25:

A preferred embodiment includes a subscription television system having a plurality of received channels. At least one of these channels is associated with codes to allow determination of content from variable segments. It is also possible to identify these variable segments without these codes, although the preferred system includes use of such codes. These codes also allow simple identification of the content for accounting purposes. Upon detection of a variable segment, a commercial advertisement is selected for presentation to the recipient. This variable segment is selected based on the characteristics of the recipient(s), the history of use of the device by the recipient(s), the context of use, the arrangements made by the commercial information provider(s) for presentation of information, and the availability of information for presentation. Other factors may include the above-mentioned accounting system factors. Typically, the local device will include a store of commercial information, downloaded or otherwise transmitted to the recipient (e.g., a CD-ROM or DVD with MPEG-2 compressed images). A telecommunication link may also be provided to control the process, provide parameters for the presentation or the information itself. This telecommunication link may be provided through the public telephone network, Internet, private network (real or virtual) cable network, or a wireless network, for example. Generally, the underlying work will have a gap of fixed length, so that the commercial information must be selected to fit in this gap. Where the gap is of variable length, such as might occur in live coverage, the commercial information is interrupted or the underlying work buffered and delayed to prevent loss. Thus, the presentation to the user is constructed from pieces, typically at the time of presentation, and may include invariable content, variable content, invariable messages, variable messages, targeted content and/or messages, and hypervariable content. Hypervariable content includes, for example, transition material selected based on the stream of information present, and other presentations which my optionally include useful information which are individualized for the particular recipient or situation.

Page 87, lines 16-24:

Therefore, similar to the known DIVX system, an encrypted media may be mass distributed, which requires authorization for display. Instead, however, of requiring the recipient to pay for the initial and subsequent displays of the content, <u>the player integrates advertising content into the output, which may vary based on the audience, time and past history, as well as other factors discussed herein</u>. Given the interactive and variable nature of the presentation, the user or audience may even veto ("fast forward through") a particular commercial. In this case, the use may have to account for a fee, or other advertisers may tack up the slack. The veto provides information regarding the desires of the viewer, and may be used to help select future messages to the displayed or presented.

It is therefore respectfully submitted that the claims are fully supported in the specification, with an adequate written description, and that the rejection should be reversed.

ART REJECTIONS

iii. Claims 155-156 and 160-161 are rejected under 35 U.S.C. 35 U.S.C. § 102(e) as being anticipated by Vogel, US 5,253,066.

CLAIMS 155-156, 161, 174

The examiner states that Vogel discloses storing data describing available media. For example, Vogel appears to describe receiving a television schedule. Col. 3, line 51.

The examiner takes the position that Vogel discloses storing the "real time data" which includes the immediately-past selected program by the viewer. Col. 3, lines 59-61. However, it is noted that Vogel itself refers to this as the "channel currently selected", Col. 6, lines 40-41, and therefore the reference makes clear that this is not "prior", but "current". Therefore, while this information may be transiently stored while the channel selector is in a given state, there is no teaching or suggestion that after the channel is changed, the "prior" selection is retained, and thus Vogel does not teach "storing data representing previously selected media". Vogel indeed does disclose listing programs set for recording in the future, however, this data does not correspond to the claimed subject matter, as discussed below.

The examiner states that the "automatically performing a search of said available media for a correspondence to data representing content characteristics of the previously selected media, wherein said data representing content characteristics are not received as an input from a human user" step is met by Vogel at Col. 5, lines 13-20, which state as follows:

> PROGRAM. Pressing this button causes a display such as that of FIG. 3 to be displayed. This display is known as the PROGRAM menu, and shows a list of scheduled programs for each available channel. Channel indicator box 301 shows the date and channel to which each column of schedule information relates. Each entry in the schedule shows the scheduled time of broadcast, title and censorship classification.

The examiner states that the available media are part of the real time data (Col. 3, lines 59-66). In this interpretation, the electronic program guide (EPG) data is not itself input by the user, and comprises the content characteristics of the available media. Since, according to this interpretation, the EPG is filtered based (merely) on the selected channel, a "search" is allegedly performed. It is respectfully submitted that, in fact, no search is performed by Vogel; the channel identifier of the selected channel is used as an index to reference a single listing in the EPG, and no "search" of the contents of the EPG is performed, as this term is commonly understood in the art by those of ordinary skill. Thus, for example, if a search were performed, then two available media with identical "data representing content characteristics" should <u>both</u> be returned. Note that the channel identifier is not a content characteristic of the media, but rather it represents delivery information. That is, a letter delivered to one street address does not have a different content characteristic than an identical letter delivered to a different address. Likewise, a letter delivered by FedEx to one address does not have a different content characteristic than an identical one delivered by the U.S. Postal service to the same address. The same media delivered on different channels, or to different destinations, maintains the same <u>content</u>. It is noted that the entries made by the user for future recording are also not automatically searched for a correspondence, since the EPG entry itself is the basis for the selection.

The word "content" has accepted meanings in the art, and the examiner is not free to ignore the known and respected meaning. The examiner has misinterpreted this term to encompass the package or delivery mechanism for the media, rather than the media itself. Relevant definitions of the word "content" in Google (relating to media) are:

- message: what a communication that is about something is about

- subject: something (a person or object or scene) selected by an artist or photographer for graphic representation; "a moving picture of a train is more dramatic than a still picture of the same subject"

- Meaning or message contained and communicated by a work of art, including its emotional, intellectual, symbolic, thematic, and narrative connotations.
www.yannisstavrou.gr/art-glossary.htm

- The graphics, video, sound and text that makes up a web page is usually referred to as the content.
www.verio.com/support/files/glossary.cfm

- Message, idea, or feelings expressed in a work of art.
www.kn.att.com/wired/art2/guide/glossary.html

- any files that are played back, including graphics files, sound files, video files, and script files themselves.
www.digitalsignagetoday.com/glossary.php

- The message the work communicates. The content can relate to the subject matter or be an idea or emotion. Theme is another word for content.
clackhi.nclack.k12.or.us/~edgintonwWeb/handouts/visualartvocab.doc

- information that is available online. The "message" rather than the "medium."
cyber.law.harvard.edu/readinessguide/glossary.html

- The expression, essential meaning, significance, or aesthetic value of a work of art. Content refers to the sensory, subjective, psychological, or emotional properties we feel in a work of art, as opposed to our perception of its descriptive aspects alone.
www.tbsd.k12.ca.us/bhs/Perry/art%20vocabulary.htm

- The intellectual substance of a document, including text, data, symbols, numerals, images, and sound. Along with context and structure, content is one of the three fundamental aspects of a record. [SAA: Glossary of Archival and Records Terminology]
secint33.un.org/unarms/en/unrecordsmgmt/unrecordsresources/glossaryofrecordkp.html

- the subject matter of a work of art and its values apart from the artist's ability. Form and content are the two elements that comprise a work.
www.worldimages.com/art_glossary.php

- That which conveys information, eg text, data, symbols, numerals, images, sound and vision.
www.naa.gov.au/recordkeeping/er/guidelines/14-glossary.html

- The "meat" of a document, as opposed to its format, or appearance.
www.microsoft.com/technet/prodtechnol/Visio/visio2003/plan/glossary.mspx

- Content refers to source data on which end-user searches are based. Content may consist of Web pages, FAQ items, glossary definitions, database records, or records from a Content Management System (CMS).
publib.boulder.ibm.com/infocenter/discover/v8r4/topic/com.ibm.discovery.ds.mgmt.doc/c_MCG_Basic_Terms_and_Concepts.htm

- Information of interest to a human being - sound, text, pictures, video, etc. As opposed to computer software, which can be run on computers by people, but which is not useful and interesting information in and of itself.
ieladesign.com/ma-thesis/glossary.html

- The copy, words or actual content used within emails and websites.
www.emaildirect.com/page.ww

- the meaning communicated in a given work.
www.creativephotography.org/education/guides/reframe/glossary.html

(It is noted that here, and hereinbelow, applicant has presented a body of linguistic information representing various definitions of claim terms. The Board is free to ignore these definitions, but must, as a part of its legal and factual obligation to properly interpret the claims, define the meaning of claim terms presented before considering the issue of prior art. See, Markman v. Westview Inst., 517 US 370 (1996). Therefore, in order to provide guidance for future prosecution, and fulfill its obligations of review, the Board is respectfully request to clearly enunciate its interpretation of the claims. KSR v. Teleflex, 550 U.S. ___, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007), states: "To facilitate review, this analysis should be made explicit. See In re Kahn, 441 F. 3d 977, 988 (CA Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").)

Finally, the examiner states that the step in claim 155 of "automatically issuing a notification of available media having characteristics corresponding to, but not identical to previously selected media" is met by Vogel's disclosure in Fig. 4 of "not only … the previously selected media and available media (recorded programs) corresponding to, but not identical to (different classifications, times and channels)) previously selected media (see again Col. 5, lines 13-20 and Fig. 3 for notifying the user (by displaying the program menu) where notification contains a classification for each program)."

It is initially noted that the examiner uses two different meanings for "available media": the first, in the "storing data" step, in which the EPG data is stated to meet this element, and second in the "automatically issuing" step wherein the "recorded programs" are argued to

correspond with this element. Even assuming arguendo that the "available media" could encompass both simultaneously, the reference still fails to meet the claim language.

It is noted that the word "characteristics" is pluralized. Vogel matches a single identifier of the currently selected channel to determine the correct EPG listing. Therefore, only a single "characteristic" is matched. This distinction supports applicant's interpretation that the claim scope cannot so be trivialized as presented by the examiner. The subject element requires a correspondence involving "characteristics" (plural). Vogel indeed displays human editorial input characteristics of the available media, as shown in Fig. 2, including title and censorship classification. It does not, however, teach or suggest that any notification is issued for available media having characteristics in any way corresponding to the previously selected media.   Fig. 4, for example, shows status, and the right-hand column appears to represent shows scheduled for recording.

Claim 155 specifically requires that the automatically issued notification exclude identical "previously selected media". Nowhere does Vogel teach or suggest any such exclusion, nor any means for determining identity of media. It is further noted that the media is defined by its content characteristics, and not its time and channel slot, and Vogel does not preclude representation of the same media content.

Likewise, the filtering of Vogel (based e.g., on censorship classification) is in no way dependent on the characteristics of the prior media selection by the user, and the reference provides no enabling teaching for determining a correspondence.

It is therefore respectfully submitted that claim 155 is distinguished in a number of ways from Vogel, and that the rejection should be reversed.

Claims 156, 161 and 174 are likewise distinguished.

CLAIM 160

Claim 160 is rejected on the basis that the censorship classifications of Vogel are allegedly "themes". This rejection is respectfully traversed. The classification information in Vogel is disclosed as follows:

> CLASSIFICATION. Pressing this button causes a display such as that shown in FIG. 4 to appear on the television screen. This display is known as the STATUS menu. The CLASSIFICATION function relates to the text in the left-hand column of the display, headed "ENABLE". The letters shown in the column under ENABLE represent the following classifications:
> C: Suitable for children
> G: General viewing
> A: Adult
> R: Restricted
> AD: Advertisement or other non-program material

On the other hand, a person or ordinary skill in the art understands the word "theme" to encompass a different scope. Potentially relevant definitions provided by Google (search performed 10/12/07 on "define: theme") are as follows:

- subject: the subject matter of a conversation or discussion; "he didn't want to discuss that subject"; "it was a very sensitive topic"; "his ...
- a unifying idea that is a recurrent element in a literary or artistic work; "it was the usual `boy gets girl' theme"
- (music) melodic subject of a musical composition; "the theme is announced in the first measures"; "the accompanist picked up the idea and elaborated it"
- composition: an essay (especially one written as an assignment); "he got an A on his composition"
- root: (linguistics) the form of a word after all affixes are removed; "thematic vowels are part of the stem"
- provide with a particular theme or motive; "the restaurant often themes its menus"
wordnet.princeton.edu/perl/webwn
- In the visual arts, a theme is a broad idea or a message conveyed by work done in a visual experience, such as a performance, a painting, or a motion picture. This message is usually about life, society or human nature. Themes are the fundamental and often universal ideas explored in a work. ...
en.wikipedia.org/wiki/Theme_(arts)
- In music, a theme is the initial or primary melody. The 1958 Encyclopédie Fasquelle defines a theme as follows: *"Any element, motif, or small musical piece that has

given rise to some variation becomes thereby a theme."
en.wikipedia.org/wiki/Theme_(music)
- In computing, a theme is a preset package containing graphical appearance details, used to customise the look and feel of (typically) an operating system, widget set or window manager.
en.wikipedia.org/wiki/Theme_(computing)
- In linguistics, the topic (or theme) is informally what is being talked about talked about, and the comment (rheme or focus) is what is being said about the topic. Although this general nature of topic-comment dichotomy is generally accepted, anything beyond that is a matter of great controversy.
en.wikipedia.org/wiki/Theme_(linguistics)
- Abstract idea embodied in a literary work.
www.let.rug.nl/usa/lit/chap10.htm
- A user-defined perspective on a coverage, grid, tin or image geographic data set specified, if applicable, by a coverage name and feature class or data set name, attributes of interest, a data classification scheme, and theme-specific symbology for drawing.
www.mcaggis.com/Glossary.html
- An idea based upon a particular subject.
www.kn.att.com/wired/art2/guide/glossary.html
- A consistent kind of meaning.
method.vtheatre.net/dict.html
- "A salient abstract idea that emerges from a literary work's treatment of its subject-matter; or a topic occurring in a number of literary works." (CB)
writing2.richmond.edu/jessid/eng216/216terms.html
- A general term for the underlying concept of a book. (see: hook)
www.sedgeband.com/glossary.html
- is the central message of a literary work. It is not the same as a subject, which can be expressed in a word or two: courage, survival, war, pride, etc. The theme is the idea the author wishes to convey about that subject. ...
campus.digication.com/English9/11._Tone_and_other_Literary_Terms
- 1. a topic of discussion, writing, etc. 2. a major idea or proposition broad enough to cover the entire scope of a literary or other work of art. Note: A theme may be stated or implicit, but clues to it may be found in the ideas that are given special prominence or tend to recur in a work.
www.nde.state.ne.us/READ/FRAMEWORK/glossary/general_p-t.html
- The central idea of a work.
www.wcs.k12.va.us/users/bonaker/Literary_TermsTeaching1.ppt
- the central idea and what the story is about.
www.scriptsales.com/DDFundTerms.html
- Descriptive statement representing a major component of a strategy, as articulated at the highest level in the Vision. Most strategies can be represented in three to five themes. ...
www.pilotsoftware.com/resources/pm_glossary.html
- A common term referring to a birth chart.
www.findyourfate.com/faq/t-glossary.htm
- a relatively recent change in search engine ranking algorithms, theme-based engines essentially try to determine what a page is "about" — and to compare it to other pages

that seem to be related to the same topic — and rank it highly for certain keywords that are determined to be related to ...
www.accesstoebusiness.com/glossary.htm
- a musical idea, usually a melody, that forms the basis or starting point for an entire composition or a major section
www.learner.org/channel/workshops/artsineveryclassroom/p4popups/vocabulary.html
- The musical subject of a piece (usually a melody), as in sonata form or a fugue. An extramusical concept behind a piece.
www.geocities.com/mecmirror/t.htm
- central message or insight into life revealed through the literary work. It's not a condensed summary of the plot. Instead, it'sa generalization about people or about life that's communicated through the literary work
teacherslounge.editme.com/files/emartinstories/Short%20Story%20Literary%20Terms.doc
- a central idea. In nonfiction prose it may be thought of as the general topic of discussion, the subject of the discourse, the thesis. In poetry, fiction, and drama it is the abstract concept that is made concrete through representation in person, action, and image. ...
www.english.uga.edu/~msmith/1102_literary_terms.htm
- A theme is a file or (usually) collection of files (php, theme, css, jpg, gif, png), which together determine the look and feel of your site. These files are often used by one of the theme engines available for Drupal which is a PHP file of functions which turn arguments into HTML markup. ...
drupal.org/node/937
- The author's message about a topic within a text
ncdk12.org/instruction/curriculum/reading/glossary.shtml

It is respectfully submitted that no relevant definition of "theme" encompasses the

information used by Vogel to perform censorship, and therefore that claim 160 distinguishes

Vogel.

CLAIMS 162 AND 163

vi. Claim 162 is also rejected under 35 U.S.C. § 102(e) as being anticipated in view

of Vogel.

Claim 162 provides a system, comprising:

a controller component configured to control delivery of a media program; and

a processor component configured to automatically determine a correspondence between

data representing content characteristics of media within a set of available media programs with

data representing content characteristics of previously delivered media, wherein said data representing content characteristics are not received as input from a human user, and producing a signal dependent on a degree of said correspondence.

As discussed above with respect to claim 155, Vogel does not teach or suggest "automatically performing a search of said available media for a correspondence to data representing content characteristics of the previously selected media, wherein said data representing content characteristics are not received as an input from a human user", and it is believed that at least the processor component of claim 162 is likewise distinguished.

In addition, claim 162 provides that the processor produc[es] a signal dependent on a <u>degree</u> of said <u>correspondence</u>. Vogel does not teach or suggest any signal that is dependent on a <u>degree</u> of a <u>correspondence</u>. Vogel teaches if at all, that an EPG listing matching a currently selected program is selected. The degree of correspondence requires something more than a mere binary decision determination of match or no-match. The word "degree" is related to the word "gradation", each implying a level within a range rather than an absolute.

Google provides the following relevant definitions of "degree":

- a position on a scale of intensity or amount or quality; "a moderate grade of intelligence"; "a high level of care is required"; "it is all a ...
- a specific identifiable position in a continuum or series or especially in a process; "a remarkable degree of frankness"; "at what stage are the social sciences?"
- the seriousness of something (e.g., a burn or crime); "murder in the second degree"; "a second degree burn"
wordnet.princeton.edu/perl/webwn
- step, grade, or rank, as in: She suffered third-degree burns on her arms rescuing the child.
www.business-words.com/dictionary/D.html

Claim 163 is only inferentially rejected in the Final Office Action, page 7. However, to the extent it stands rejected, it is likewise distinguished on the same basis as claim 162.

CLAIM 164

Claim 164 is inferentially rejected on page 5 of the Final Office Action. Claim 164 provides that the signal produces a list of choices through a human user interface. While Vogel does teach a human user interface which presents a list, no such list is produced dependent on "a signal dependent on a degree of said correspondence". It is therefore respectfully submitted that claim 164 is distinguished.

CLAIM 165

Claim 165 is inferentially rejected on page 8 of the Final Office Action.

Claim 165 provides that interaction with said system through a user interface serves as an input to an adaptive algorithm of said processor component for determining said correspondence. Wikipedia defines an "adaptive algorithm" as "…an algorithm which changes its behavior based on the resources available." Adaptive algorithms may also change in dependence on data operated upon. Vogel does not teach or suggest and algorithm which changes behavior based on resource availability or data; the process of Vogel employs purely a matching and filtering paradigm, which acts the same in every case.

CLAIM 175

Claim 175 is inferentially rejected on page 8 of the Final Office Action. Claim 175 (dependent from claim 177) provides the step of automatically generating data representing characteristics of media. It is not seen how the data representing characteristics of media is

"automatically" generated by Vogel. While there is certainly automation in the communication process, the generation process is undefined, and presumably a manual process dependent on express human input. "Generate", the root word of "generating" is defined in relevant part (according to Google) as:

- bring into existence; "The new manager generated a lot of problems"; "The computer bug generated chaos in the office"
- render: give or supply; "The cow brings in 5 liters of milk"; "This year's crop yielded 1,000 bushels of corn"; "The estate renders some revenue for the family"
- produce (energy); "We can't generate enough power for the entire city"; "The hydroelectric plant needs to generate more electricity"
wordnet.princeton.edu/perl/webwn
- The automated creat[i]ng of something.
javaworkshop.sourceforge.net/glossary.html
- To Create. A click of the Save and Generate button in WebIT saves the work and creates the items on the Development area of the server.
www.bc.edu/offices/techsupport/fac-staff/web/webitsupport/docs/glossary/
- Produce. Energy cannot be created or destroyed, but it can be changed from one form to another. To generate energy is to change energy to a usable form.
www.actewagl.com.au/education/Glossary/default.aspx
- to create or produce
activities.macmillanmh.com/science/ca/grade4/glossary/g.html

Therefore, it is respectfully submitted that Vogel does not teach or suggest the automated generation of a description of media content.

CLAIM 176

Claim 176 is inferentially rejected on page 8 of the Office Action.

Claim 176 provides that the data representing characteristics comprises a description of media content. Vogel does not "describe" or employ descriptions of media content, any more that the rating of a movie describes that movie or the title of a book *necessarily* describes the content of that book. In some cases, the name and rating of two works may be identical, but the

any rational description would be different. Therefore, these characteristics fail to meet the express claim element.

CLAIM 177

Claim 177 is inferentially rejected in view of the art on page 9 of the Final Office Action.

The examiner proposes that Claim 177 is similar in scope to claims 155, 162 and 168. Applicants disagree, in part, but otherwise adopt and incorporate by reference the arguments set forth above for claims 155 and 162. In particular, claim 177 relates to "content" characteristics. As discussed above, the EPG of Vogel fails to support the distinctions between "characteristics" and "content characteristics", the later requiring that the characteristics relate to content, and not the "container" in which it is carried. Thus, the title of a program does not represent a characteristic of the content, and likewise, the censorship classification does not represent a characteristic of the content. Claim 177 also automatically determines a <u>degree</u> of correspondence between data representing content characteristics of a member of the set of available media programs and the data representing content characteristics of previously selected media. Claim 177 also specifically outputs an identification of at least one member of the set of available media programs having <u>content characteristics</u> corresponding to <u>content characteristics</u> of previously selected media in dependence on the automatically determined correspondence. Even assuming *arguendo* that the EPG listing defines "content" characteristics of the previously selected media, it does not teach or suggest determining a correspondence between the <u>content characteristics</u> of at least one member of the set of available media programs and <u>content characteristics</u> of previously selected media in dependence on the automatically determined correspondence. Therefore, claim 177 is believed distinguished from Vogel.

CLAIM 178

Claim 178 is inferentially rejected on page 9 of the Final Office Action.

Claim 178 provides, *inter alia*, that the identification of at least one member of the set of available media programs having content characteristics corresponding to content characteristics of previously selected media is presented as a selectable object in a graphic user interface. As discussed above, Vogel does not determine a relationship between respective content characteristics. Indeed, since there is no disclosure of storage of the content characteristics of previously selected media <u>after</u> they are currently selected, except perhaps an EPG listing (per the interpretation of the examiner) stored in conjunction with a recording, which it is respectfully submitted is not corresponded with anything to produce an output identification. Therefore, claim 178 is respectfully distinguished from the Vogel reference.

CLAIM 179, 180 AND 181

Claims 179, 180 and 181 are inferentially rejected on pages 9-10 of the Final Office Action.

Claim 179 provides a method for presenting media, comprising the steps of:

storing data representing at least one content parameter relating prior selections by a respective user, the at least one parameter not being input by that respective user;

determining a set of available media programs, each member of the set having at least one associated content parameter;

automatically determining a degree of correspondence of prior selections by the respective user and members of the set of available media programs based on at least the content

parameters relating to prior selections by the respective user and the associated content

parameters of members of the set of available media programs; and

outputting a reference to at least one member of the set of available media programs

based on at least the automatically determined degree of correspondence.

The EPG of Vogel fails to support the distinctions between "characteristics" and a

"content parameter", the later requiring that the parameter relate to content, and not the

"container" in which it is carried. Claim 179 also automatically determines a <u>degree</u> of

correspondence between of prior selections by the respective user and members of the set of

available media programs based on at least the content parameters relating to prior selections by

the respective user and the associated content parameters of members of the set of available

media programs. Claim 179 also specifically outputs a reference to at least one member of the

set of available media programs based on at least the <u>automatically determined degree of</u>

<u>correspondence</u>. Even assuming *arguendo* that the EPG listing defines a "content parameter" of

the previously selected media, it does not teach or suggest automatically determining <u>a degree of</u>

<u>correspondence</u> of prior selections by the respective user and members of the set of available

media programs based on at least <u>the content parameters relating to prior selections by the</u>

<u>respective user</u> and the <u>associated content parameters of members of the set of available media</u>

<u>programs</u>. Therefore, claim 179 is believed distinguished from Vogel.

Claims 180-181 are likewise distinguished.

CLAIM 182

Claim 182 is inferentially rejected on page 10 of the Final Office Action.

Claim 182 provides a method for proposing media, comprising the steps of:

storing data representing content-dependent characteristics of media previously selected by a respective user;

determining a set of available media, the set being associated with data representing content-dependent characteristics of members of the set of available media;

automatically determining a degree of correspondence between content-dependent characteristics of available media and content-dependent characteristics of media previously selected by the respective user; and

outputting an identification of at least one member of the set of available media having content-dependent characteristics corresponding to content-dependent characteristics of previously selected media by the respective user.

In claim 182, the characteristics are "content-dependent characteristics", which even more strongly reinforce the distinctions drawn above with respect to Vogel. The <u>degree</u> of correspondence is determined. Other distinctions are provided which are analogous for the claim elements of the other independent claims, as set forth above, for example, with respect to claim 177. That is, not only does Vogel fail to store data representing <u>content-dependent characteristics</u> of media previously selected by a respective user, it also fails to teach or suggest determining a set of available media, the set being associated with <u>data representing content-dependent characteristics</u> of members of the set of available media; automatically determining <u>a degree of correspondence</u> between <u>content-dependent characteristics of available media</u> and <u>content-dependent characteristics of media previously selected by the respective user</u>; and outputting an identification of at least one member of the set of available media having <u>content-dependent characteristics corresponding to content-dependent characteristics of previously</u>

selected media by the respective user. Claim 182 is therefore respectfully believed to be distinguished from Vogel.

CLAIM 183, 184-186, 189, AND 193

Claims 183, 184-186 are inferentially rejected on page 9 of the Final Office Action.

Claim 189 is inferentially rejected on page 11 of the Final Office Action.

Claim 183 provides a method for selecting media, comprising the steps of:

receiving data describing a plurality of content characteristics of available media;

defining data representing a plurality of content characteristics of media previously selected by a respective user;

automatically determining a relation between the available media and the media previously selected by the respective user, based on a respective plurality content characteristics of the available media and media previously selected by the respective user; and

producing an output in dependence on the automatically determined relation.

Claim 183 therefore employs "content characteristics", as previously distinguished, and particularly recites that the relation between the available media and media previously selected by the respective user is automatically determined based on a respective plurality of content characteristics. This claim therefore further reinforces the requirement for multiple characteristics to be related, as previously discussed, for example with respect to claim 177. Claims 184-186, 189, and 193 are likewise distinguished.

CLAIM 187

Claim 187 is inferentially rejected in view of the art on page 11 of the Final Office Action.

Claim 187 provides that the output comprises a displayed list of hypertext entries representing available media, further comprising the step of receiving a selection of one of the hypertext entries. The examiner cites Vogel, Col. 5, lines 51-59. However, not every graphic user interface employs hypertext. The entry for Hypertext of WikiPedia provides as follows (edited for brevity and relevant, see http://en.wikipedia.org/wiki/Hypertext):

> **Hypertext** most often refers to text on a computer that will lead the user to other, related information on demand. Hypertext represents a relatively recent innovation to user interfaces, which overcomes some of the limitations of written text. Rather than remaining static like traditional text, hypertext makes possible a dynamic organization of information through links and connections (called hyperlinks). Hypertext can be designed to perform various tasks; for instance when a user "clicks" on it or "hovers" over it, a bubble with a word definition may appear, or a web page on a related subject may load, or a video clip may run, or an application may open.

> *Etymology*

> The prefix **hyper-** (Modern Greek term for "over" or "beyond") signifies the overcoming of the old linear constraints of written text. The term "hypertext" is often used where the term hypermedia might seem appropriate. In 1992 Ted Nelson - who coined both terms in 1965 - wrote:

> By now the word "hypertext" has become generally accepted for branching and responding text, but the corresponding word "hypermedia," meaning complexes of branching and responding graphics, movies and sound - as well as text - is much less used. Instead they use the strange term "interactive multimedia" - four syllables longer, and not expressing the idea that it extends hypertext. - Nelson, Literary Machines 1992

> *Types and uses of hypertext*

> Hypertext documents can either be static (prepared and stored in advance) or dynamic (continually changing in response to user input). Static hypertext can be used to cross-reference collections of data in documents, software applications, or books on CD. A well-constructed system can also incorporate other user-interface conventions, such as

menus and command lines. Hypertext can develop very complex and dynamic systems of linking and cross-referencing. The most famous implementation of hypertext is the World Wide Web.

History

Early precursors to hypertext

Recorders of information have long looked for ways to categorize and compile it. Early on, experiments existed with various methods for arranging layers of annotations around a document. The most famous example of this is the Talmud. Various other reference works (for example dictionaries, encyclopedias, etc.) also developed a precursor to hypertext, consisting of setting certain words in small capital letters, indicating that an entry existed for that term within the same reference work. Sometimes the term would be preceded by a pointing hand dingbat, ☞LIKE THIS, or an arrow, ▶ LIKE THIS.

Later several scholars entered the scene who believed that humanity was drowning in information, causing foolish decisions and duplicate efforts among scientists. These scholars proposed or developed proto-hypertext systems predating electronic computer technology. For example, in the early 20th century, two visionaries attacked the cross-referencing problem through proposals based on labor-intensive, brute force methods. Paul Otlet proposed a proto-hypertext concept based on his monographic principle, in which all documents would be decomposed down to unique phrases stored on index cards. In the 1930s, H.G. Wells proposed the creation of a World Brain.

Michael Buckland summarizes the very advanced pre-World War II development of microfilm based rapid retrieval devices, specifically the microfilm based workstation proposed by Leonard Townsend in 1938 and the microfilm and photoelectronic based selector, patented by Emmanuel Goldberg in 1931.[1] Buckland concludes: "The pre-war information retrieval specialists of continental Europe, the 'documentalists,' largely disregarded by post-war information retrieval specialists, had ideas that were considerably more advanced than is now generally realized." But, like the manual index card model, these microfilm devices provided rapid retrieval based on pre-coded indices and classification schemes published as part of the microfilm record without including the link model which distinguishes the modern concept of hypertext from content or category based information retrieval.

The Memex

All major histories of what we now call hypertext start in 1945, when Vannevar Bush wrote an article in *The Atlantic Monthly* called "As We May Think," about a futuristic device he called a Memex. He described the device as a mechanical desk linked to an extensive archive of microfilms, able to display books, writings, or any document from a library. The Memex would also be able to create 'trails' of linked and branching sets of pages, combining pages from the published microfilm library with personal

annotations or additions captured on a microfilm recorder. Bush's vision was based on extensions of 1945 technology - microfilm recording and retrieval in this case. However, the modern story of hypertext starts with the Memex because "As We May Think" directly influenced and inspired the two American men generally credited with the invention of hypertext, Ted Nelson and Douglas Engelbart.

The invention of hypertext

Ted Nelson coined the words "hypertext" and "hypermedia" in 1965 and worked with Andries van Dam to develop the Hypertext Editing System in 1968 at Brown University. Engelbart had begun working on his NLS system in 1962 at Stanford Research Institute, although delays in obtaining funding, personnel, and equipment meant that its key features were not completed until 1968. In December of that year, Engelbart demonstrated a hypertext interface to the public for the first time, in what has come to be known as "The Mother of All Demos".

Funding for NLS slowed after 1974. Influential work in the following decade included NoteCards at Xerox PARC and ZOG at Carnegie Mellon. ZOG started in 1972 as an artificial intelligence research project under the supervision of Allen Newell, and pioneered the "frame" or "card" model of hypertext. ZOG was deployed in 1982 on the U.S.S. Carl Vinson and later commercialized as Knowledge Management System. Two other influential hypertext projects from the early 1980s were Ben Shneiderman's The Interactive Encyclopedia System (TIES) at the University of Maryland (1983) and Intermedia at Brown University (1984).

Applications

The first hypermedia application was the Aspen Movie Map in 1977. In 1980, Tim Berners-Lee created ENQUIRE, an early hypertext database system somewhat like a wiki. The early 1980s also saw a number of experimental hypertext and hypermedia programs, many of whose features and terminology were later integrated into the Web. Guide was the first hypertext system for personal computers.

In August 1987, Apple Computer revealed its HyperCard application for the Macintosh line of computers at the MacWorld convention in Boston, Massachusetts. HyperCard was an immediate hit and helped to popularize the concept of hypertext with the general public. The first hypertext-specific academic conference took place in November 1987, in Chapel Hill NC.

Meanwhile Nelson, who had been working on and advocating his Xanadu system for over two decades, along with the commercial success of HyperCard, stirred Autodesk to invest in Nelson's revolutionary ideas. The project continued at Autodesk for four years, but no product was released.

Hypertext and the World Wide Web

In the late 1980s, Berners-Lee, then a scientist at CERN, invented the World Wide Web to meet the demand for automatic information-sharing among scientists working in different universities and institutes all over the world.

Early in 1993, the National Center for Supercomputing Applications (NCSA) at the University of Illinois released the first version of their Mosaic web browser to supplement the two existing web browsers; one that ran only on NeXTSTEP and one that was only minimally user-friendly. Mosaic ran in the X Window System environment, which was then popular in the research community, and offered usable window-based interaction. It allowed images[2] as well as text to anchor hypertext links. It also incorporated other protocols intended to coordinate information across the Internet, such as Gopher.[3]

After the release of web browsers for both the PC and Macintosh environments, traffic on the World Wide Web quickly exploded from only 500 known web servers in 1993 to over 10,000 in 1994. Thus, all earlier hypertext systems were overshadowed by the success of the web, even though it originally lacked many features of those earlier systems, such as an easy way to edit what you were reading, typed links, backlinks, transclusion, and source tracking.

In 1995, Ward Cunningham made the first wiki available, which built on the web by adding easy editing, and (within a single wiki) backlinks and limited source tracking. Wikis continue to be a medium in which features are implemented which were developed or imagined in early explorations of hypertext.

Therefore, it is respectfully submitted that the term "hypertext" had, at the time of the invention, acquired a specific meaning in the art, and Vogel does not teach or suggest a system or method which employs hypertext as that term was commonly understood. While the Board is free to interpret the term "hypertext" without reference to Wikipedia, it must interpret that term and make its claim construction explicit, as required by KSR.

CLAIM 188

Claim 188 is inferentially rejected on page 11 of the Final Office Action.

Claim 188 is distinguished similarly to claim 160. Note also that claim 188 specifically discusses the plurality of content characteristics, and is thus further distinguished from Vogel.

iv. Claims 157-159 and 166 are rejected under 35 U.S.C. § 103 as being obvious over Vogel in view of Young (US 4,706,121).

CLAIMS 157 AND 158

Claim 157 provides a method according to claim 155, wherein the step of automatically issuing a notification includes the step of producing a display including a list of the available media meeting a predetermined correspondence criteria on a display screen for viewing. While claim 157 is distinguished on at least the same basis as claim 155, it is noted that the system and method of Vogel are capable of producing only a single match for the currently selected program from the EPG (even if the examiner interprets this as previously selected). Therefore, the purported list(s) created by Vogel are either independent of the user selection, and represent the raw program guide, or the selected programs or programs to be recorded by the user, for which no relevant search is performed of previously selected media. Vogel does not teach or suggest the use of any "correspondence criteria".

Young discloses the use of "theme" information. However, the combination of Vogel and Young does not remedy the deficiencies set forth above, and indeed, the architecture of the proposed combination is not readily apparent. While In re Wands is typically applied to written description rejections in chemical and biotech arts patent applications, it also presumably applies to the ability to combine prior art in the context of a rejection while achieving a predictable result. A proper rejection cannot be formulated by simply aggregating a set of possible elements from Vogel and a set of elements of Young, and simply try each and every permutation, let alone presuming that each such permutation might be readily implemented by persons of ordinary skill without the exercise of inventive skill for actual operation. There must be some motivation in

the art to combine the references, in the precise way suggested by the examiner, to achieve the claimed results (see KSR), wherein the combination must be enabled by the prior art without the exercise of undue experimentation.

One might hypothesize that if Vogel received an EPG such as that according to Young, and provided software for filtering the listing for selected themes, then this represents the architecture proposed by the Examiner. Indeed, were the stated element of claim 157 simply an independent claim, it *might* be deemed met by Young. However, this is not an issue to be resolved; the claim as a whole is more complex, since the "correspondence criteria" refers back to the language of claim 155, which states: "automatically issuing a notification of available media having <u>characteristics corresponding to, but not identical to previously selected media</u>". Thus, Young does not address this type of correspondence, and therefore does not remedy the core deficiencies of Vogel, and fail to individually or in combination teach or suggest the claimed invention as a whole.

Claim 158 is likewise distinguished.

CLAIM 166

Claim 166 provides that the at least one memory (of claim 162) further stores information regarding at least two humans, wherein said signal is dependent on a defined set of humans. In this case, both Vogel and Young are distinguished based on the reference in claim 166 to the signal of claim 162, that is, the signal dependent on a <u>degree</u> of said correspondence is also dependent on a defined set of humans. Therefore, Young fails to remedy the deficiencies of Vogel.

v. Claims 167 and 190-191 are rejected under 35 U.S.C. § 103 as being obvious over Vogel in view of Campbell et al. (US 4,536,791).

CLAIM 167

Claim 167 provides a system wherein a presentation of media is restricted in dependence on a financial transaction. Applicant concedes that pay-per-view technologies, including program accounting and selective availability, were known prior to the present application. Campbell is apparently cited only for this proposition. In fact, base claim 162 is distinguished in that a processor component configured to automatically determine a correspondence between data representing content characteristics of media within a set of available media programs with data representing content characteristics of previously delivered media is provided. As discussed in the application at length, the implementation of pay-per-view technologies and selective availability was generally inconsistent at the time of the application with automated recording and content filtering technologies. In order to access the content for determining characteristics, it must be made available; therefore, the very elements leading to content use restriction sought to be enforced would be undermined. The present application teaches various ways to employ protected content without unintentionally releasing that content absent a financial accounting. Therefore, while the present application provides the relevant teachings, the proposed combination of references fails to provide an enabling disclosure for the system as a whole, in which the respective dependent claim element would be operative within the environment of Claim 162.

CLAIMS 190 AND 191

Claim 190 provides a method comprising the step of restricting a use of available media in dependence on a financial transaction. Claim 191 provides a method comprising the step of financially accounting in dependence on the output. In fact, base claim 183 is distinguished by automatically determining a relation between the available media and the media previously selected by the respective user, based on a respective plurality content characteristics of the available media and media previously selected by the respective user. As discussed in the application at length, the implementation of pay-per-view technologies and selective availability was generally inconsistent at the time of the application with automated recording and content filtering technologies. In order to access the content for determining characteristics, it must be made available; therefore, the very elements leading to content use restriction sought to be enforced would be undermined. The present application teaches various ways to employ protected content without unintentionally releasing that content absent a financial accounting. Therefore, while the present application provides the relevant teachings, the proposed combination of references fails to provide an enabling disclosure for the system as a whole, in which the respective dependent claim element would be operative within the environment of the respective base claim 183.

vii. Claims 168-173 and 192-193 are rejected under 35 U.S.C. § 103 as being obvious over Vogel in view of Wachob (US 5,155,591).

CLAIMS 168, 169 AND 171-172

Claim 168 provides a system for selecting media items, comprising:

(a) a user interface for receiving a selection of a media item and for delivering a response to the selection;

(b) a processor for automatically searching media items available for selection and for presenting a recommendation of at least one available media item, based on a degree of correspondence of said selection and content characteristics of available media items input independently of a human user; and

(c) an accounting database for recording commercial transaction data relating to selections received.

The examiner asserts that Vogel presents a "recommendation". No such disclosure is believed to be present. A recommendation is defined in relevant part by Google as:

- something (as a course of action) that is recommended as advisable
- something that recommends (or expresses commendation) of a person or thing as worthy or desirable
- any quality or characteristic that gains a person a favorable reception or acceptance or admission; "her pleasant personality is already a recommendation"; "his wealth was not a passport into the exclusive circles of society"
wordnet.princeton.edu/perl/webwn
- A non-binding declaration, which has no force in law and is mainly used to assist the interpretation of other acts.
international.lga.gov.uk/european_work/glossary.html
- Formal expression of an advisory nature of the will of the governing body of an international organization or international agreement. It is not binding.
www.unep.org/DEC/OnLineManual/Resources/Glossary/tabid/69/Default.aspx

- refers to an action which is advisory in nature rather than one having any binding effect; or a decision in some other form customarily used by the international organisation.
www.mot.gov.sg/airtransport/airglossary2.doc

- in international law, a text - in principle, not, binding upon the States party to it - which provides only directives to be followed and measures to be taken.
www.diplomatie.gouv.fr/label_france/DUDH/english/glossaire.html

- A request by The Council to other bodies to take action on matters outwith The Council's control. A recommendation is an indication of The Highland Council's views on a specific subject and is not legally binding.
www.highland.gov.uk/yourenvironment/planning/developmentplans/localplans/glossary.htm

- a Recommendation from the Rights Commissioner or Labour Court is, in most cases, merely that – a non-binding recommendation. ...
www.siptu.ie/YourRights/TUFGuideToLabourLaw/GeneralInformation/Glossary/

Vogel, at best filters or matches based on broad categories, and does not suggest or advise of anything. Likewise, Vogel does not teach or suggest that any such "recommendation" might be "based on a degree of correspondence of said selection and content characteristics of available media items input independently of a human user." It is particularly noted that the output of Vogel with respect to a censored set of programs is an express element and mandate made by the user, and therefore is fully binding, and not optional, as would be a "recommendation". Nothing in Wachob remedies this deficiency. Indeed, Wachob apparently filters commercials based on user demographic characteristics, and not based on user selections and/or content characteristics. Claims 169 and 171-172 are likewise distinguished.

CLAIM 170

Claim 170 provides that the recommendation presented by the processor comprises a display including a list of the available media meeting a predetermined correspondence criteria on a display screen for viewing. The "recommendation" itself is distinguished as described above with respect to claim 168. Further, claim 170 provides that the recommendation is a list of

available media meeting the predetermined correspondence criteria. This refers back to the claim language "based on a degree of correspondence of said selection and content characteristics of available media items input independently of a human user". Therefore, the claim is likewise distinguished from the references, individually or in combination, since these do not teach or suggest processing based on a degree of correspondence.

CLAIM 173

Claim 173 provides a system wherein the database is configured to store a history of selections made by a plurality of users. While Wachob stores a history of commercial play to respective viewers, it does not store the user selections, especially in the context of claim 168. The commercials of Wachob are determined by the system based on user demographics, and are not self-selected by the viewer. Therefore, claim 173 is believed distinguished.

CLAIM 192

Claim 192 provides a method comprising the step of delivering an advertisement in dependence on characteristics of media previously selected by the user. In fact, the section of Wachob cited by the Examiner, Col. 7, line 13-Col. 8, line 66, makes clear that the advertisement is delivered based on the user demographic characteristics, and not characteristics of media previously selected by the user:

> A flowchart illustrating the operation of the converter software contained in ROM 32 in a preferred embodiment is provided in FIG. 3. The software routine begins at box 150, which passes control to box 152 where tag information transmitted by the system headend is read. The tag information defines if and when a commercial is about to occur, how long it will last, and which channel the converter should tune to given the viewer demographic type. If the tag information does not indicate that a commercial is about to occur, as determined at box 154, the converter stays tuned to the present television program channel, as indicated at box 156. Otherwise, control passes to box 158 where a

determination is made as to whether demographic commercial options are available. If not, the converter remains tuned to the present channel as indicated at box 160.

If the converter contains data indicative of a viewer's demographic characteristics, and the headend is providing a channel for commercials targeted to such a viewer, the targeted commercials will be provided to the viewer. At box 162, the viewer demographic type stored in RAM 36 is determined. At box 164, the length of the impending commercial message break is determined from the tag information transmitted by the headend. At box 166, the converter determines which channel to tune to in order to receive the targeted commercials. The channel information is either defined by the tag information received from the headend, or has previously been stored in converter memory 36. Then, at box 168, the converter tunes to the correct channel for the commercials to be received. This is accomplished by a signal from microprocessor 30, that directs tuner 18 to tune in the appropriate commercial message channel.

Tuner 18 remains tuned to the commercial message channel for a preset length of time (i.e., the length of the commercial break) or until new tag information is received from the headend directing the converter to retune to the original television program channel. The return to the original channel is effected at box 172. Control then returns to box 152 where the process repeats.

In the event that a group of television viewers are watching a television together, and more than one viewer demographic type is present, a hierarchy/priority decision is made by the converter software to determine the dominant demographic type present. The prioritization method can be based, for example, upon a weighted average of all the viewers present. Alternately, the viewer who initiated the present channel decision, or the person who makes household buying decisions can be given priority. The flowchart of a routine for receiving data input by a viewer (including demographic data), dealing with a plurality of viewers, and storing said data for possible later retrieval and analysis is provided in FIG. 4.

The routine of FIG. 4 commences at box 180, and control is passed to box 182 where a determination is made as to whether a command initiated by a viewer is being input to the converter. Once an incoming command is detected (e.g., from a viewer's remote control), control passes to box 184 where data indicative of selections made by a viewer, including demographic data pertaining to the viewer(s), are received. At box 186, a determination is made as to whether demographic data were received for more than one viewer. If so, the highest priority viewer is identified at box 188. The viewer demographic type of the highest priority viewer is stored in RAM 36, as indicated at box 190. Then, at box 192, the actual command (e.g., change of channel) entered by the viewer is executed. Control then returns to box 182 where the process repeats.

In the event the cable television system operator wants to provide market research data to advertisers concerning, e.g., demographic information, channels/programs viewed, pay-per-view purchases, etc., RAM 36 will also store cumulative data indicative of the selections made by users via the remote control or converter keyboard. As indicated at box 190, microprocessor 30 will append this data with the date and time of the selections so that the actual programs or other services selected can be identified. The

date and time information can be received by microprocessor 30 from the headend via FM data receiver 26. Information concerning other converter functions, such as the position of A/B switches for bypassing the converter or viewing off-air programs, can also be determined and stored. A routine for the subsequent transmission of this market research data to the headend is shown in FIG. 7.

The routine of FIG. 7 commences at box 200, and at box 202 a determination is made as to whether the converter 10 (FIG. 1) has received a data retrieval tag instruction from the headend. Such an instruction would be sent down the cable and received by FM data receiver 26. Upon recognition of a data retrieval tag in the FM data stream addressed to the particular converter, microprocessor 30 determines whether any pertinent data are stored in RAM 36, as indicated at box 204. If not, control returns to box 202 until a data retrieval tag instruction is received and relevant data are found in RAM 36.

If relevant market research data have been stored in RAM 36, control passes from box 204 to box 206 where the data are retrieved from RAM 36. As indicated at box 208, the data are then transmitted to the headend via return path 44, which may be any conventional return path well known in the art. For example, if a telephone return path is used, return path 44 will include a modem to modulate the data for transmission over a telephone line. In a two-way cable system, an RF return path may be used. At box 210, a determination is made as to whether all of the pertinent market research data have been transmitted to the headend and whether the transmission has been verified. If not, the data transmission repeats until it is complete. At box 212, the accumulated market research data are cleared from RAM 36, although the current viewer demographic data will remain so that a user will not have to re-enter this information after the market research data have been retrieved. Control then returns to box 202 to await the next request by the headend for the retrieval of market research data from the converter.

It is therefore respectfully submitted that claim 192 is distinguished, since neither Vogel nor Wachob teach or suggest delivering an advertisement in dependence on characteristics of media previously selected by the user.

CONCLUSION

It is respectfully submitted that the rejections should be reversed. The claims each meet the requirements of 35 U.S.C. § 112, and are definite and supported by an enabling specification with an adequate written description. The examiner has failed to establish a prima facie case of anticipation or obviousness with respect to any independent claim, as properly construed, and therefore the rejections should be reversed.

Respectfully submitted,

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(viii) Claims appendix.

Claims 1-154 (Cancelled)

155.   A method for selecting media, comprising the steps of:

storing data describing available media and storing data representing previously selected media;

automatically performing a search of said available media for a correspondence to data representing content characteristics of the previously selected media, wherein said data representing content characteristics are not received as an input from a human user; and

automatically issuing a notification of available media having characteristics corresponding to, but not identical to previously selected media,

wherein said media comprises a media program.

156.   The method of claim 155 wherein said media comprises television programs and said data describing available media comprises a channel guide list comprising content characteristics.

157.   The method of claim 155, wherein said step of automatically issuing a notification includes the step of producing a display including a list of the available media meeting a predetermined correspondence criteria on a display screen for viewing.

158.   The method of claim 157, further comprising a step of altering the produced display in dependence on at least input received from a data entry device.

159.   The method of claim 158, further comprising the step of selecting one of the available media items displayed on the list of available media.

160.   The method of claim 155, wherein said data representing said characteristics of previously selected media comprises media theme information.

161.   The method of claim 155, further comprising the step of displaying a list of available programs, and receiving an input for recording a selected one of the available programs.

162.   A system, comprising:

a controller component configured to control delivery of a media program; and

a processor component configured to automatically determine a correspondence between data representing content characteristics of media within a set of available media programs with data representing content characteristics of previously delivered media, wherein said data representing content characteristics are not received as input from a human user, and producing a signal dependent on a degree of said correspondence.

163.   The system according to claim 162, wherein said signal controls a recording of a media program.

164.   The system according to claim 162, wherein said signal produces a list of choices through a human user interface.

165.   The system according to claim 162, wherein interaction with said system through a user interface serves as an input to an adaptive algorithm of said processor component for determining said correspondence.

166.   The system according to claim 162, wherein said at least one memory further stores information regarding at least two humans, wherein said signal is dependent on a defined set of humans.

167.   The system according to claim 162, wherein a presentation of media is restricted in dependence on a financial transaction.

168.   A system for selecting media items, comprising:

(a)   a user interface for receiving a selection of a media item and for delivering a response to the selection;

(b)   a processor for automatically searching media items available for selection and for presenting a recommendation of at least one available media item, based on a degree of correspondence of said selection and content characteristics of available media items input independently of a human user; and

(c)   an accounting database for recording commercial transaction data relating to selections received.

169.   The system of claim 168, wherein said media items comprise television programs and said stored characteristics comprise a channel guide list, and television program-descriptive text accompanies said channel guide list.

170.   The system of claim 168, wherein said recommendation presented by said processor comprises a display including a list of the available media meeting a predetermined correspondence criteria on a display screen for viewing.

171.   The system of claim 168, wherein said characteristics comprise an identification of a program type.

172.   The system according to claim 168, wherein said processor controls a recording of a said media item.

173.   The system according to claim 168, wherein said database is configured to store a history of selections made by a plurality of users.

174.   The method according to claim 155, further comprising the step of receiving media programming information as the data representing characteristics of media.

175. The method according to claim 177, further comprising the step of automatically generating data representing characteristics of media.

176. The method according to claim 155, wherein the data representing characteristics comprises a description of media content.

177. A method for proposing media, comprising the steps of:

storing data representing content characteristics of media previously selected, wherein the data representing characteristics of media previously selected are not input by a respective human user;

determining a set of available media programs, the set being associated with data representing content characteristics of members of the set of available media programs;

automatically determining a degree of correspondence between data representing content characteristics of a member of the set of available media programs and the data representing content characteristics of previously selected media; and

outputting an identification of at least one member of the set of available media programs having content characteristics corresponding to content characteristics of previously selected media in dependence on the automatically determined correspondence.

178. The method according to claim 177, wherein the identification of at least one member of the set of available media programs having content characteristics corresponding to content characteristics of previously selected media is presented as a selectable object in a graphic user interface.

179.   A method for presenting media, comprising the steps of:

storing data representing at least one content parameter relating prior selections by a respective user, the at least one parameter not being input by that respective user;

determining a set of available media programs, each member of the set having at least one associated content parameter;

automatically determining a degree of correspondence of prior selections by the respective user and members of the set of available media programs based on at least the content parameters relating to prior selections by the respective user and the associated content parameters of members of the set of available media programs; and

outputting a reference to at least one member of the set of available media programs based on at least the automatically determined degree of correspondence.

180.   The method according to claim 179, wherein the reference comprises an object in a graphic user interface.

181.   The method according to claim 179, wherein the reference comprises a selectable object in a graphic user interface.

182.   A method for proposing media, comprising the steps of:

storing data representing content-dependent characteristics of media previously selected by a respective user;

determining a set of available media, the set being associated with data representing content-dependent characteristics of members of the set of available media;

automatically determining a degree of correspondence between content-dependent characteristics of available media and content-dependent characteristics of media previously selected by the respective user; and

outputting an identification of at least one member of the set of available media having content-dependent characteristics corresponding to content-dependent characteristics of previously selected media by the respective user.

183.   A method for selecting media, comprising the steps of:

receiving data describing a plurality of content characteristics of available media;

defining data representing a plurality of content characteristics of media previously selected by a respective user;

automatically determining a relation between the available media and the media previously selected by the respective user, based on a respective plurality content characteristics of the available media and media previously selected by the respective user; and

producing an output in dependence on the automatically determined relation.

184.   The method according to claim 183, wherein the available media comprises at least one available media program.

185.   The method according to claim 183, wherein the available media comprises at least one television program.

186.   The method according to claim 183, wherein the plurality of content characteristics of the available media are derived from an electronic program guide.

187.   The method according to claim 183, wherein said output comprises a displayed list of hypertext entries representing available media, further comprising the step of receiving a selection of one of the hypertext entries.

188.   The method according to claim 183, wherein at least one of the plurality of content characteristics of the available media comprises theme information.

189.   The method according to claim 183, further comprising the step of recording at least one of the available media in dependence on the output.

190.   The method according to claim 183, further comprising the step of restricting a use of available media in dependence on a financial transaction.

191.   The method according to claim 183, further comprising the step of financially accounting in dependence on the output.

192.   The method according to claim 183, further comprising the step of delivering an advertisement in dependence on characteristics of media previously selected by the user.

193.   The method according to claim 183, further comprising the step of accounting for delivery of an advertisement.

(ix) Evidence appendix.

None.

(x)   Related proceedings appendix.

None.